

Claim Objections

2. Claim 2 is not specifically identifiable in the revised claims, but its intent has been incorporated into the new claims.

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Claim Rejections – 35 USC § 112

3. The paragraph quoted is noted.

10 4. The content of rejected claims 1-2 and 11 has been reorganized and rewritten to comply with the requirements of 35 USC § 112.

Claim Rejections – 35 USC § 102

15 5. The quotation is noted.

6. I find nothing in either Skistimas patent that anticipates claims 1-2 and 11 or any of the revised claims presented as part of this response. It is true that "Skistimas discloses in Figs 1-9, a balloon display including at least one framework 11, at least two apertures [grid opening 12], at least one inflatable chamber [balloons 13, 14, 15] being at least partially inflated and circumscribed by a portion of the framework defining the apertures [Fig 1]". However, each and every time, that Skistimas describes a balloon being held within an aperture of his framework the sole mechanism that he describes for holding the balloon in place is the pneumatic pressure of the balloon expanding outward against the surrounding framework. There are 9 such descriptions in patent 5,533,285 and 11 such descriptions in patent 5,675,922. There are instances where he abbreviates this description to "and held in place by interior sides" or "held in place by the inflation of the balloon". I found no instances in either patent where he suggests any other mechanism for holding balloons within an aperture. I

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have attached copies of both patents with the referenced descriptions underlined and numbered for identification.

In patent 5,675,922 there are three text references to balloons that are attached to a framework by other means. The references are underlined and labeled as A, B and C in the attached copy of the patent. If one reads the text alone there might be some confusion concerning the status of these balloons as regards their placement inside or outside of apertures. The drawings, however, make their status clear. The view of balloon 18 in Fig 3 shows the balloon outside the framework, not within an aperture. The view of balloon 18 in Fig 1 shows the balloon outside the framework, not within an aperture. This is also clear in Fig 1 once the reader recognizes that balloon 18 is located at the intersection of four grid openings. There are four solid rods centered behind balloon 18. There is no grid aperture that would circumscribe balloon 18 in the position shown. This is similarly true of balloon 17 in Fig 1 and balloons 28 in Fig 5.

In patent 5,533,285 the balloons, 18, 17, and 28 are represented as balloon S. Figs 1, 3, and 5 of this patent portray balloon S in the same way as Figs 1, 3, and 5 in patent 5,675,922. Balloon S is not within an aperture. There are also matching A, B, and C text references to balloon S in patent 5,533,285. They are similarly underlined and labeled in the attached copy of patent 5,533,285.

Discussion of Prior Art and Revised Claims

60 Year Review

It is a basic thesis of this application that until my inventions, aperture

5 frameworks have depended upon pneumatic pressure of the balloons expanding outward as the active mechanism to hold balloons in place within apertures. Skistimas is one of the more recent examples. The earliest example I have found is a patent application filed on February 23, 1939 by C. C. Illers. [Patent # 2,247,635]

The Illers patent (attached) describes a dart game where apertures in a panel

10 hold balloons that are inflated slightly larger than the openings. The panel is decorated to suggest ascending hot air balloons. Participants throw darts at the balloons. The display depends on the pneumatic pressure of the balloons expanding outward against the frame to generate sufficient friction to hold the balloons in place within the apertures. No other mechanism is given or suggested for holding the balloons within an aperture.

15 Neil Schwartz reports (affidavit attached) producing an aperture balloon display in the early 1970's that is strikingly similar to that disclosed in the Skistimas patents. Schwartz pulled inflated balloons into grid openings in order to hold them in place. He then added a second layer of balloons on top by tying them to the framework.

20 Robert Naughton reports (affidavit attached) the construction and use of an aperture balloon display where balloons were held by pneumatic pressure of the balloons against the inside of the surrounding framework. This was a "Tic, Tac, Toe Balloon Game used publicly by E. K. Fernandez Shows in its carnival midway since April of 1983. No other mechanism is presented for holding the balloons in place.

Ui Kahananui confirms (affidavit attached) the report of Robert Naughton.

25 Amy Stewart-Snively describes (affidavit attached) two aperture frameworks with balloons held in the apertures by pneumatic pressure. Stewart created the first of her aperture framework balloon displays in 1985 by taping together facial tissue boxes into a grid, enlarging the openings in the boxes and squeezing 5" balloons into the openings. She made the second aperture framework from an expandable baby gate in 1988. She 30 squeezed balloons in the openings in order to hold them in place for a sales display.

The pressure of the balloons expanding against the surrounding framework is the single mechanism described for holding the balloons in place.

Stewart also describes two additional designs where balloons are held in place by pneumatic pressure. In these later cases, however, frameworks acted as backing 5 and anchors for balloons. Other balloons were squeezed between the anchored balloons to hold the second balloons in place and complete the designs.

In 1988 I used strips cut from my Rouse Designer Panels as an aperture framework to create palm leaves. The strips had .75" diameter apertures every 4". I pulled half the length of inflated #260 balloons through the openings. The balloons 10 were held there exclusively by the pneumatic pressure of the balloons expanding against the inside walls of the opening. Illustrations are attached.

Philip Cedilius reports (affidavit attached) creating a balloon display in 1989 that matches specifications and claims in the Skistimas patents. Cedilius squeezed inflated balloons into 6" square wire grid where they were held by pneumatic pressure of the 15 balloons expanding outward against the surrounding wire frame.

David Gulley reports (correspondence attached) using an identical system for balloon displays in 1990.

Kevin LaCount reports (affidavit attached) viewing a balloon display by Rob Knapp in 1990 in which balloons were displayed , squeezed into holes in a cylinder of 20 foam board. This display was part of LaCounts' inspiration for creating an aperture framework balloon display of his own in 1991. LaCount squeezed inflated balloons into the openings of wooden lattice where the pressure of the balloons expanding outward against the surrounding lattice held them. LaCount continued to use this system and taught his technique in 1995 at the International Balloon Arts Convention.

25 George Quintero reports (affidavit attached) using the same system of balloons squeezed into lattice in 1992 or earlier.

In 1993 Jim and Pat Skistimas created a balloon blanket by squeezing balloons into a wire grid as part of the balloon competition at the International Balloon Arts Convention. Continental American Corporation dba Pioneer Balloon Company took up 30 the idea of the wire grid with balloons squeezed into it, filed the Skistimas patent application, and began production of the double wire grid version of the product. Since

the introduction of this Skistimas Design System (SDS), SDS has become widely used. Examples are often published. To the best of my knowledge SDS has been consistently used according to the patent. Balloons are held in the apertures exclusively by the pneumatic pressure of the balloons expanding outward against the

5 surrounding framework.

In 1995 I introduced the Rouse Matrix System (RMS). A patent has since been allowed on this expandable framework for balloon displays. It incorporates a series of overlapping and generally parallel cuts in sheet material to produce an expandable matrix of apertures. I call this form of framework an "Overlapping Cut Expandable

10 Matrix". It was most often used as an aperture framework with balloons in pairs squeezed into apertures and held there by the pressure of the balloons expanding outward against the surrounding framework.

Inspired in part by patent infringement issues with the pending Skistimas patent, I began to develop ways to improve aperture framework balloon displays. The goal was

15 to make improvements while avoiding conflict with the Skistimas restatement of the industry standard that calls for balloons to be held in the apertures exclusively by pneumatic pressure. In the first part of 1997 I exhibited one invention that both improved on my overlapping cut expandable matrix and avoided conflict with the Skistimas claims. At the Eastern States Balloon Symposium I introduced an

20 overlapping cut expandable matrix where the end user (usually a balloon decorator) would add spray adhesive to the framework before inserting balloons. While this was a messy task for the decorator, it did improve the hold on balloons to keep balloons in position against both bumps in handling and against shrinkage of balloons over time.

This was a very narrowly defined invention. It was only an end user application.

25 It was effective only with my framework. Other aperture frameworks are open when they reach the end user. A typical, competing metal framework would, for instance be 30 times the size of an unexpanded RMS framework designed to build the same balloon display. The competing framework would therefore be roughly 30 times as difficult to spray. In addition, a very high percentage of the spray on the open framework would be

30 wasted. It would paint mostly the empty space of the apertures. With RMS the framework came unopened and flat. There were only thin slits in the sheet of material

that formed the Matrix. It could readily be sprayed in a relatively small area with a minimum of waste. Then it could be expanded for use.

I continued to work on possibilities until, finally, the flood gate opened and I realized that I already had at my disposal, from other display systems, a host of 5 methods for holding the balloons in place in the apertures. Many of these are described in some detail in the specifications and included in the claims. Even for me, the switch in thinking was neither obvious nor immediate.

You have above, a sketch of 60 years of aperture framework balloon displays. It illustrates a consistent and exclusive dependence upon pneumatic pressure of inflated 10 balloons expanding outward as the mechanism for holding balloons within display apertures until 1997. My disclosure in 1997 was limited to end user applied spray adhesive on an overlapping cut expandable matrix.

Claims Analogy

15 The literature you sent me used variations in the design of a car for patent writing examples. Let me suggest such an analogy now. The analogy may not be perfect but may help to characterize my invention and claims.

Let us suppose that manufacturers of automobiles have always had seats in their cars every since motorized vehicles were introduced one hundred years earlier. These 20 seats have had a large range of support systems well known to the industry. However, every since convertible cars were first introduced forty years after the first cars were manufactured, convertibles have always had their seats supported exclusively by inflatable chambers. These air seats provided a nice cushy ride that seemed to go well with the free spirit of the convertible but did have disadvantages. The support was not 25 as secure as some other means and the air always leaked out eventually and the seat support system never lasted as long as other parts of the car. The one exception came a few years ago when someone came out with a patented, "Super Support" version of inflatable air chamber seat support that made it relatively easy, even if a bit messy, for the car driver to insert little ribs around the edge of the inflatable seat support. This type 30 seat reinforcement was effective only with the Super Support version of seat support.

Our inventor claims a convertible car with a support system that includes other means of support than an air chamber or a Super Support air chamber with end user inserted ribs. As other support means for car seats are well known in the trade, this innovation for convertible cars would not require more specific details in order for someone of normal skill in the trade to construct such a vehicle. On the other hand, nearly sixty years of use of air chambers as the single means of support for car seats in convertibles suggests that the switch to including other means of support for seats in convertible cars was not obvious. Also, since the disclosed use of customer inserted ribs with Super Support inflatable chambers was not practical with other inflatable seat supports, the disclosure would not make it obvious to use such ribs in other ways for convertible seat supports.

The situation is similar for balloon displays. There are very many apparatus and techniques well known in the trade for fixing the position of balloons in a display. For at about sixty years, however, the trade has restricted itself to pneumatic pressure as the active positioning means of choice when it comes to balloons within the openings of aperture framework balloon displays. There are other means which are more secure or last longer. There are other means which, when used in conjunction with pneumatic pressure or with each other will hold balloons more securely or hold them in position longer. There are enough of these means known in the trade that a professional of normal skill in the trade, once taught to do so, could identify and use one of these means with aperture frameworks without the particular means being specified.

The present invention teaches the professional to apply to aperture displays, his knowledge of balloon positioning means drawn from other displays. It also teaches a broad list of positioning means. This list is broader than would typically be known by someone of normal skill in the trade. In fact the list includes means not previously known to the trade. The list does include adhesive applied to the framework at manufacture, where it is more practical than for the end user and where it can be effectively used on a larger range of frameworks than just the overlapping cut expandable matrix.

Thank you again for your comments, references and attachments. They have been enormously helpful in clarifying my own thinking and writing about my invention. I hope and expect this response, including appended amendments and reference documents, communicate my invention clearly and successfully.

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Sincerely Yours,

A handwritten signature in black ink, appearing to read "R Rouse". The signature is fluid and cursive, with a prominent "R" at the beginning.

10 Graham Rouse